

Patent claims

1. Polymerisable dental composition, containing

- 5 (a) 10 to 98.999 wt.-% of at least one bi- or higher-functional ethylenically unsaturated monomer,  
(b) 0 to 88.999 wt.-% of at least one monofunctional ethylenically unsaturated monomer,  
(c) 0 to 5 wt.-% of an accelerator,  
10 (d) 0.001 to 5 wt.-% of a redox initiator system which can trigger the radical polymerisation, and  
(e) 0 to 88.999 wt.-% fillers, thixotropic auxiliaries, retarders and other auxiliaries,  
(f) 1 to 30 wt.-% of a customary plasticizer

15 characterized in that the redox initiator system comprises (i) a barbituric acid derivative and/or a malonyl sulfamide and (ii) an organic peroxide, selected from the group of the mono- or multifunctional carboxylic acid peroxyesters, and the constituents (a) to (f) are present in two pastes spatially separated from each other.  
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2. Polymerisable dental composition according to claim 1,  
characterized in that one of the two pastes separated spatially from each other includes (i) a barbituric acid derivative and/or a malonyl sulfamide and (ii) an organic peroxide, selected from the group of the mono- or multifunctional  
25 carboxylic acid peroxyesters.

3. Polymerisable dental composition according to one of claims 1 or 2,  
characterized in that the organic peroxide is a carboxylic acid tertiarybutyl-  
peroxyester.

- 30 4. Polymerisable dental composition according to one of claims 1 to 3,  
characterized in that the organic peroxide is a carbonic-tertiarybutyl-peroxy-(2-ethylhexyl)ester or a 3,5,5-trimethylhexanoic acid-tertiarybutyl-peroxyester.

5. Polymerisable dental composition according to one of the previous claims, characterized in that constituent (a) is contained in a concentration of 30 to 80 wt.-%, preferably in a concentration of 45 to 70 wt.-%.
- 5 6. Polymerisable dental composition according to one of the previous claims, characterized in that constituent (b) is contained in a concentration of 0 to 58.99 wt.-%, in particular in a concentration of 0 to 33.9 wt.-%.
- 10 7. Polymerisable dental composition according to one of the previous claims, characterized in that constituent (c) is contained in a concentration of 0 to 3 wt.-%, in particular in a concentration of 0.05 to 2 wt.-%.
- 15 8. Polymerisable dental composition according to one of the previous claims, characterized in that constituent (d) is contained in a concentration of 0.01 to 3 wt.-%, preferably in a concentration of 0.05 to 2 wt.-%.
- 20 9. Polymerisable dental composition according to one of the previous claims, characterized in that constituent (e) is contained in a concentration of 10 to 68.99 wt.-%, preferably in a concentration of 20 to 53.9 wt.-%.
10. Polymerisable dental composition according to one of the previous claims, characterized in that constituent (f) is contained in a concentration of 1 to 20 wt.-%, preferably in a concentration of 1 to 15 wt.-%.
- 25 11. Use of the polymerisable dental composition according to claims 1 to 10 as filling material, stump build-up material, fixing cement, temporary crown and bridge material, dental material or for the preparation of inlays, onlays, facing shells, modelling materials.